

Abstract of the Disclosure

Conversion errors of the prior art are reduced by a piece wise linear analog to digital converter. The analog to digital (A/D) converter operates between a minimum voltage and a maximum voltage and uses one or more comparators to generate one or more digital bits, each of the digital bits representative of a conversion voltage.

5 A first voltage interval is allocated for linear analog to digital conversion. This first voltage interval extends from the minimum voltage to an intermediate voltage, where the intermediate voltage is less than the maximum voltage. A second voltage interval extends from the intermediate voltage to the maximum voltage. An error correcting band is encoded in the analog signal between the first voltage interval and the second
10 voltage interval.

Each of the comparators used in the A/D has a sensing level. The error correcting band is centered with respect to one of the sensing levels, the sensing level located at the intermediate voltage. The error correcting band extends over a correcting voltage. The correcting voltage is a fraction of the conversion voltage.